

# Shellfish

## Total Maximum Daily Load (TMDL) Implementation Plan

The Commonwealth of Virginia has developed a process for developing clean-up plans for impaired waters with an established total maximum daily load. This approach involves bringing all stakeholders to the table in order to collaborate, using the best technical resources available, to develop an implementation plan that will effectively and efficiently address pollutant source issues within the local community. Here are some of the most frequently asked questions about developing a shellfish TMDL clean-up or implementation plan.



### What is a TMDL implementation plan?

A TMDL implementation plan (IP) is a guide that outlines the steps involved in cleaning up a waterbody or waterbodies that are not meeting water quality standards. In the case of shellfish impairments, the waterbody is not meeting the bacterial water quality standard needed to safely harvest shellfish for human consumption.

### Why develop a shellfish TMDL implementation plan?

Developing an IP is an important step towards reducing pollution levels and attaining the water quality standard in an impaired water body. The plan outlines specific measures which can include the use of better treatment technology, installation of Best Management Practices (BMPs), and corrective actions to remove or reduce pollutant sources. The successful completion of a shellfish IP provides a community strategy to reduce the pollution level of bacteria in a waterbody to restore a use that should result in better economic and environmental conditions in the local area.

### What are the state and federal requirements for a TMDL implementation plan?

**State Requirements:** The TMDL IP is a requirement of Virginia's 1997 Water Quality Monitoring, Information, and Restoration Act (Section 62.1-44.19:4 through 19:8 of the Code of Virginia) or WQMIRA (the "Act"). WQMIRA directs the State Water Control Board "to develop and implement a plan to achieve fully supporting status for impaired waters" (Section 62.1-44.19.7). In order for implementation plans to be approved by the Commonwealth they must meet the requirements as outlined by WQMIRA.

**Federal Recommendations:** Section 303(d) of the Clean Water Act and current EPA regulations do not require the

development of TMDL implementation strategies as part of the TMDL process. They, however, do require reasonable assurance that the load and waste load allocations can and will be implemented. Load allocations refer to nonpoint source pollution (i.e., runoff, septic system seepage, etc.) while waste load allocations are for point sources (permitted discharges). EPA outlines the minimum elements of an approvable IP in its 1999 "Guidance for Water Quality-Based Decisions: The TMDL Process" in order for states to receive federal grant funds for IP development and/or implementation.

The Virginia Departments of Conservation and Recreation (DCR) and Environmental Quality (DEQ) have developed a guidance manual for developing TMDL IPs. The IP should address the EPA recommendations and it must include all required components as described by WQMIRA.

### What are the basic elements or components of a TMDL implementation plan?

According to state requirements and federal recommendations an IP will include the following:

- Description of the necessary implementation actions and management measures
- Timeline for implementing these measures and the expected date of achievement of water quality objectives
- Legal or regulatory controls
- Measurable goals
- Associated costs, benefits, and environmental impact of addressing the impairment
- A monitoring plan and milestones for attaining water quality standards

In addition, IPs should also include:

- Potential funding sources
- Description of public participation process
- Stakeholders' roles and responsibilities
- Integration with other watershed plans



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## What is the public participation process for a TMDL implementation plan?

An essential step in the implementation plan process is input from a broad range of landowners and residents; community organizations; and local, state and federal agencies. Public participation is facilitated through:

**Public meetings**, a minimum of two – first to provide a general description of the IP development process and a solicitation for participation in focus groups. The second meeting is to present the draft IP for a 30-day public comment period. The meetings are published in the *Virginia Register* and are advertised through other means including local newspapers and the placement of signs throughout the watershed.

**Focus groups or work groups** are formed to deal with a number of implementation issues such as agricultural, residential, industry, environmental, governmental, etc. The representation within groups is generally made up of citizens and personnel from government and various organizations who are knowledgeable and interested in the specific issues the focus group is to address.

**Steering Committee** provides oversight in the implementation process. It is comprised of members from each of the work groups as well as personnel from the key agencies involved in the plan development.

## What types of information, data, and resources are needed to develop an implementation plan?

An IP should be based on the most recent data on watershed land uses, including aerial photography. Any changes in source data such as populations of humans, livestock, pet and wildlife occurring since TMDL development and updated documentation on agricultural, residential and urban practices must be solicited through all possible sources. The types of information and data sources that are available along with the resources needed are as follows:

- DCR's agricultural BMP and cost-share database to identify practical and most cost-effective implementation actions,
- The costs of equipment, structures, maintenance, and installation of various BMPs,
- Costs associated with technical and administrative assistance,
- Software needs – Geographical information system and Excel spreadsheets,
- Personnel - Knowledge of local conditions, shellfish production, agricultural operations, and septic and

alternative waste treatment systems,

- Information on local restoration efforts, local monitoring sources and data, and
- Extensive coordination among federal and state agencies, community organizations, local governments, Soil and Water Conservation District, stakeholders, citizens, and businesses.

## At what geographical scale are the shellfish TMDL implementation plans developed?

To date, only two shellfish IPs have been developed in Virginia. Shellfish impairments in coastal areas of Virginia lend themselves to IP development at a waterbody, major tributary, river basin, or even county-wide scale because the rural land uses, being dominated by forest and cropland with lesser amounts of pasture, residential and urban land, are more homogeneous than in other areas of Virginia. When determining scale, the likelihood that a specific growing area can be reopened to commercial shellfish harvesting should be considered in prioritizing IP development.

## How long does the process take?

Developing the IP typically takes nine months, although in situations based on the complexity and scale of the IP (i.e., number of impaired waterbodies included) the process may require more time. To get started, an informational meeting should be held locally with DCR and DEQ staff along with invited stakeholders to become familiar with the IP development process and gauge local interest in developing such a plan.

## Can anything be done to reduce bacteria sources before an IP is developed?

Certainly, individual stewardship efforts are welcome at any time. Here are a few examples of actions you can initiate to improve water quality in shellfish growing areas:

- Maintain your septic system, by following the Virginia Department of Health recommended septic pump-out frequency of every 3-5 years.
- Pick-up pet waste from lawns and dog walking areas and dispose of it in the trash or install a pet waste composter on your property.
- Contact DEQ about establishing a No Discharge Zone for boats.
- Refrain from feeding wildlife such as ducks and geese.
- Practice good housekeeping in areas where fish are cleaned, bait is handled, and crab pots are stored to reduce raccoon traffic in the near shore environment.
- Exclude livestock from rivers and streams.
- Establish and maintain vegetated buffers and wetlands.